From: Terry, Robert [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP

(FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=C02F0BBAADAC4B5AB42C2D5BBCF20465-RTERRY03]

Sent: 4/15/2015 8:31:28 PM

To: Hausladen, Martin [/o=ExchangeLabs/ou=Exchange Administrative Group

http://www.epa.gov/superfund/health/contaminants/radiation/radrisk.htm.

(FYDIBOHF23SPDLT)/cn=Recipients/cn=aa651596b9e54719b8064fb58d513ad7-MHAUSLAD]

CC: Chesnutt, John [/o=ExchangeLabs/ou=Exchange Administrative Group

(FYDIBOHF23SPDLT)/cn=Recipients/cn=e1cd369e94474c2c8a876fb16943320a-JCHESNUT]

Subject: FW: RAD Questions

Attachments: rad_arar.pdf

OSWER directive 9200.4-18 remains in effect, but you should also be aware of a December 17, 1999, memorandum http://www.epa.gov/superfund/health/contaminants/radiation/pdfs/riskqa.pdf, and more particularly of the June 13, 2014, OSWER directive 9285.6-20 http://www.epa.gov/superfund/health/contaminants/radiation/pdfs/Rad%20Risk%20QA%20with%20transmit%20memo_June_13_2014.pdf, which advises that EPA no longer associates a risk of 3 x 10-4 with an average radiation dose rate of 15 mrem/yr (30 yr suburban residential scenario), but rather with an average radiation dose rate of 12 mrem/yr. Other relevant CERCLA risk assessment guidance can be found at

As for an authoritative reference to the 10-6 to 10-4 risk management range, I have never found such a document; as I understand it, that range has simply taken on a life of its own. In order to help people understand the risk management range, I point out that the upper bound of the range is a limit that must not be exceeded; one can think of the 10-6 risk level as an ALARA level, or a risk rate below which EPA would not expect a responsible party to take further remedial action under nearly any circumstances.

Also be aware that NRC is not bound to Superfund's risk management range. At an NRC-licensed site, the decommissioning rule (10CFR20.1401-1406 Subpart E -- Radiological Criteria for License Termination), which establishes a requirement for a dose rate not to exceed 25 mrem/yr, is the ARAR for NRC licensees.

It has been my experience that a responsible party that makes a good faith effort to comply with NRC's decommissioning rule invariably also achieves a cleanup that falls within EPA's risk management range, and so I have never concerned myself with any arguments over which requirement is actually more protective of public health. Anyone who wants to pursue the issue should consider the operational matters that govern the implementation of each Agency's requirements.

NRC and EPA have been at odds over which agency's standards have primacy since the beginning of time, or perhaps even before that. At the present time, the question is one of jurisdiction.

You might be interested to know that, here at Region 9, in our conversations with the Navy regarding various Bay Area sites (e.g., Hunters Point, Alameda Point, Treasure Island, etc.) we have encouraged the Navy and its contractors not to cite a CERCLA remedial project cleanup limit of 3 x 10-4 (reference OSWER 9285.6-20 and other directives), but rather to reference Superfund's risk management range of 10-6 to 10-4. The Navy's final status surveys have regularly demonstrated that contaminant concentrations fall well below concentrations that we associate with a risk of 10-4, once remedial actions are complete.

Please let me know if you have any additional questions. You might also consider corresponding with Stuart Walker at EPA HQ for more authoritative -- and better informed -- responses to your concerns.

----Original Message---From: Hausladen, Martin

Sent: Wednesday, April 15, 2015 11:51 AM

To: Terry, Robert

Subject: Fw: RAD Questions

Hi Rob,

I know John spoke with you this morning about San Onofere, so I thought I would send you Theresa's email with her questions. If you have any thoughts or information, please feel free to contact me, or if you are so inclinded, just respond directly to her.

Thanks, Martin

From: Morley, Theresa L CIV NAVFAC SW <theresa.morley@navy.mil>

Sent: Wednesday, April 15, 2015 8:31 AM

To: Hausladen, Martin

Cc: Sahagun, Tracy L CIV MCIWEST-MCBCP, Environmental Security

Subject: RAD Questions

- 1) Is there a more recent guidance document for rad than the attached dated 1997? This document has a clean up level of 3x10-4 and states this falls within the EPA's risk management range. Hmmm.
- 2) What EPA guidance document states we need to clean up to 1x10-6? Do you know?

Thanks!

Theresa Morley, PE NAVFACSW 1220 Pacific Highway San Diego, CA 92132 (619) 532-1502 Theresa.morley@navy.mil